



Science Colleges
Chemistry Department
The Study Plan
1437-1438 H

Requirement Credit Hours in Chemistry Plan

Requirements		No. of Credit Hours
1-Institute Requirements		
		18
2- College Requirements		
	Requires	15
	Elective	2
3- Department Requirements		
	Requires	80
	Elective	8
4- Free courses		8
Total		131

Study Plan

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements <small>(Institution, College or Department)</small>
First Level	ENGL101	English language (1)	Required	-	3(3+0+0)	Institution.
	MATH101T	Calculus	Required	-	3(2+2+0)	College
	CHEM 101T	General Chemistry (1)	Required	-	3(2+2+0)	College
	PYS101T	General physics (1)	Required	-	3(2+2+0)	College
	BIO 101T	General Biology	Required	-	3(2+2+0)	College.
	Total	15				
Second Level	ARAB101M	Arabic composition	Required	-	2(2+0+0)	Institution.
	ISLS101M	Islamic Culture (1)	Required	-	2(2+0+0)	Institution
	ENGL102	English language (2)	Required	ENG 101	3(3+0+0)	Institution.
	CHEM 102T	General Chemistry (2)	Required	CHEM101T	3(2+2+0)	Department
	CHEM141T	Organic Chemistry (1)	Required	CHEM 101 T	4(3+2+0)	Department
	MATH103T	Calculus (II)	Required	MATH101T	4(3+2+0)	College
Total	18					
Third Level	ARAB 202M	language skills	Required	-	2(2+0+0)	Institution...
	MATH261T	General Statistics	Required	-	3(2+2+0)	College
	MATH221T	Differential Equations	Required	MATH103T	3(2+2+0)	Department
	CHEM211T	Thermodynamics	Required	CHEM101T	3(2+2+0)	Department
	CHEM242T	Organic Chemistry (2)	Required	CHEM141T	4(3+2+0)	Department
	CHEM291T	Scientific Research Skills	Required	-	2(2+0+0)	Department
Total	17					
Fourth Level	ISLS202	Islamic Culture (2)	Required	ISLS101	2(2+0+0)	Institution
	CHEM212T	States of Matter and Solutions	Required	CHEM 101T	2(2+0+0)	Department
	CHEM243T	Chemistry of Heterocyclic Compounds	Required	CHEM242T	2(2+0+0)	Department
	CHEM251T	Biochemistry	Required	CHEM242T	3(2+2+0)	Department
	College Elective	-	Elective	-	2(2+0+0)	College
	Free Elective	-	Elective	-	3(3+0+0)	Institution
Total	16					

Fifth level	CHEM313T	Kinetic Chemistry	Required	CHEM 211T	3(2+2+1)	Department
	CHEM331T	Quantitative Analysis	Required	CHEM101T	4(3+2+0)	Department
	PHY304T	General Physics (2)	Required	PYS101T	3(3+0+0)	Department
	CHEM345T	Organic Compounds Spectroscopy	Required	CHEM 243T	3(3+0+0)	Department
	CHEM307T	Computer Applications	Required	CHEM101T	1(0+2+0)	Department
	Free Elective (2)		Elective	-	2(2+0+0)	Institution
	total	16				
Sixth Level	ISLS303T	Islamic Culture (3)	Required	ISLS101	2(2+0+0)	Institution
	CHEM314T	Quantum Chemistry	Required	CHEM102T MATH221T	2(2+0+0)	Department
	CHEM315T	Electrochemistry (1)	Required	CHEM 211T	4(3+2+0)	Department
	CHEM332T	Separation Methods & Chromatography	Required	CHEM331T	3(2+2+0)	Department
	CHEM316T	Surface Chemistry & Catalysis	Required	CHEM 313T CHEM211T	4(2+4+0)	Department
	CHEM361T	Chemical Pollution and industrial Safety	* Department Elective (1)	CHEM 331T	2(2+0+0)	Department
	CHEM346T	Green Chemistry		CHEM 243T		
	CHEM 317T	Industrial Inorganic Chemistry		CHEM102T		
Total	17					
Seventh Level	CHEM447T	Mechanism of Organic Reactions	Required	CHEM 243T	3(3+0+0)	Department
	CHEM421T	Transition Elements Chemistry	Required	CHEM 102T	4(3+2+1)	Department
	CHEM433T	Instrumental Analysis (1)	Required	CHEM331T	2(2+0+0)	Department
	CHEM448T	Polymer Chemistry and Industrial Applications	* Department Elective (2)	CHEM 241T	2(2+0+0)	Department
	CHEM422T	Mechanism of Inorganic Reactions		CHEM102T		
	CHEM418T	Nuclear & Radiation Chemistry	* Department Elective (3)	CHEM314T	2(2+0+0)	Department
	CHEM419T	Molecular spectra and Laser		CHEM 419T		
	Free Elective	-	Elective	-	3(3+0+0)	Institution
Total	16					
	ISLS404	Islamic Culture (4)	Required	ISLS101	2(2+0+0)	Institution

Eighth Level	CHEM423T	Chemistry of Lanthanides & Actinides	Required	Chem102T	2(2+0+0)	Department
	CHEM417T	Electrochemistry (2)	Required	CHEM315T	4(3+2+0)	Department
	CHEM434T	Instrumental Analysis (2)	Required	CHEM433T	2(2+0+0)	Department
	CHEM435T	Instrumental Analysis Lab	Required	CHEM433T	2(0+4+1)	Department
	CHEM492T	Graduation Project	Required	-	(0+6+0)	Department
	CHEM449T	Natural Products Chemistry	* Department Elective (4)	CHEM345T	2(2+0+0)	Department
	CHEM424T	Organometallic Chemistry		CHEM 421T		
	Total	16				

Institution(University) Requirements			
Course Title	Corse code	Credit Hours	Prerequisite
Islamic Culture (1)	ISLS 101	2(2+0+0)	None
Islamic Culture (2)	ISLS 202	2(2+0+0)	ISLS 101
Islamic Culture (3)	ISLS 303	2(2+0+0)	ISLS 101
Islamic Culture (4)	ISLS 404	2(2+0+0)	ISLS 101
Arabic Composition	ARAB 101	2(2+0+0)	None
Language Skills	ARAB 202	2(2+0+0)	None
English Language (1)	ENG 101	3(3+0+0)	None
English Language (2)	ENG 102	3(3+0+0)	ENG 101
Total	18		

College Requirements			
Course Title	Corse code	Credit Hours	Prerequisite
Calculus(1)	MATH 101 T	3(2+1+0)	None
General Physics(1)	PHYS 101 T	3(2+1+0)	None
General Chemistry(1)	CHEM 101 T	3(2+1+0)	None
General Biology	BIO 101 T	3(2+1+0)	None
General Statistics	MATH 261 T	3(2+1+0)	None
Total	15		

Elective courses from the college (Student selects 2 credit hours)			
Course Title	Corse code	Credit Hours	Prerequisite
Reading and Translation of Scientific Texts	ENGL 204 T	2	None
Scientific Miracles in Qur'an and Sunnah	ISLS 205 T	2	None
Health Education	MPH242 T	2	None
Total	2		

Elective Courses From The Department (Student selects 8 Credit Hours)				
Group	Course Title	Corse code	Credit Hours	Prerequisite
1	Green Chemistry	CHEM 346 T	2(2+0+0)	CHEM 243T
	Chemical Pollution and Industrial Safety	CHEM 361 T	2(2+0+0)	CHEM 331T
	Industrial Inorganic Chemistry	CHEM 371 T	2(2+0+0)	CHEM102T
2	Mechanism of Inorganic Reactions	CHEM 422 T	2(2+0+0)	102T
	Polymer Chemistry and Industrial Applications	CHEM 448 T	2(2+0+0)	CHEM 243T
3	Nuclear & Radiation Chemistry	CHEM 418 T	2(2+0+0)	CHEM 314T
	Molecular spectra and Laser	CHEM 419 T	2(2+0+0)	CHEM 314T
4	Organometallic Chemistry	CHEM 424 T	2(2+0+0)	CHEM 421T
	Natural Products Chemistry	CHEM 449 T	2(2+0+0)	CHEM 345T
Total		8		

Free Elective Course(s) from outside the department (8 credit hours). Student chooses a course (s) from outside the Department

